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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,031	03/26/2004	Xiaodong Jin	MP0358	1354
26200	7590	02/08/2006	EXAMINER	
FISH & RICHARDSON P.C. P.O BOX 1022 MINNEAPOLIS, MN 55440-1022			BAUER, SCOTT ALLEN	
			ART UNIT	PAPER NUMBER
			2836	

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/811,031

Applicant(s)

JIN ET AL.

Examiner

Scott Bauer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/31/05 & 3/26/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 5/31/2005 was not considered because the information referred to therein was contained on a CD-ROM/CD-R that was unreadable. Applicant is required to resubmit the file(s) in International Standards Organization (ISO) 9660 standard and American Standard Code for Information Interchange (ASCII) format as required by 37 CFR 1.52(e)(3). No new matter may be introduced in presenting the file in ISO 9660 and ASCII format.

2. In the alternative, Applicant may submit paper copies of the non-patent literature contained on the unreadable CD-ROM/CD-R. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-7, 9-15 & 17-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Jenkins et al. (US 6,738,248).

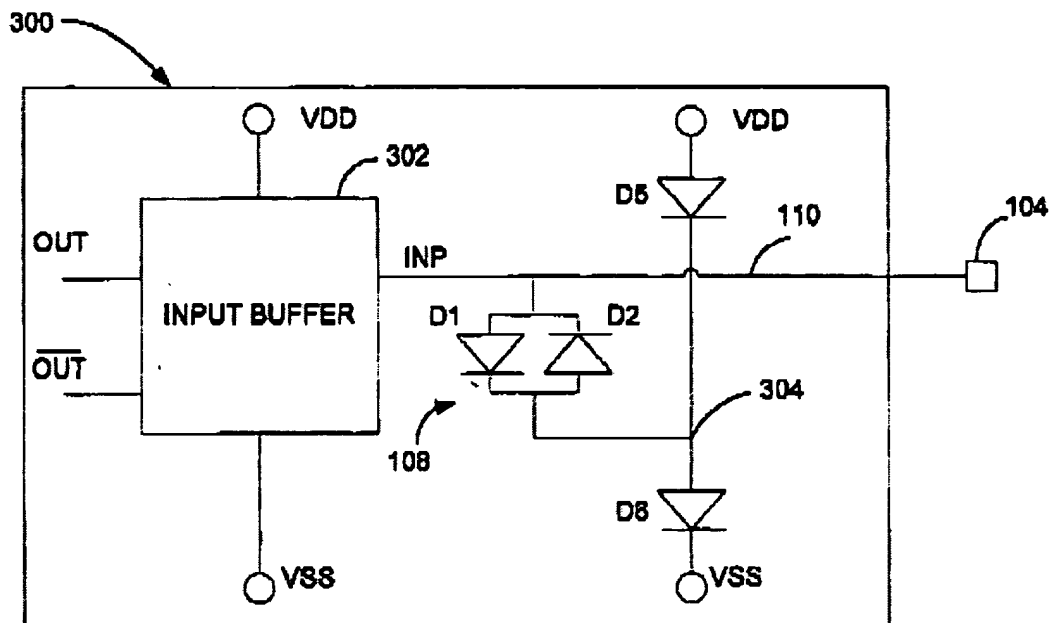


FIG. 3

5. With regard to Claim 1, Jenkins et al., in Figure 3, discloses a low noise amplifier (300), comprising: a radio frequency input (104); and an electrostatic discharge protection circuit including (108), a pair of diodes (D1 & D2) each having a first and a second terminal; a first diode (D1) of the pair having a first terminal coupled to the radio frequency input (104) and a second terminal coupled to a first supply (VSS); and a

second diode (D2) of the pair having a second terminal coupled to the radio frequency input (104) and a first terminal coupled to the first supply (VSS); the electrostatic discharge protection circuit operable to shunt electrostatic discharge current during positive and negative electrostatic discharge events away from the radio frequency input and through the first supply (column 4 lines 35-41).

In the circuit taught by Jenkins et al., the protecting circuit is not coupled directly to the first supply (VSS), but is coupled to the first supply (VSS) via clamping diode D6.

6. With regard to Claim 9, Jenkins et al., in Figure 3, discloses a low noise amplifier (300), comprising: receiving means for receiving an RF input (104); and shunting means (108) including, a pair of diode means (D1 & D2) each having a first terminal and a second terminal; a first diode means (D1) of the pair having a first terminal coupled to the receiving means and a second terminal coupled to a first supply; and a second diode means (D2) of the pair having a second terminal coupled to the receiving means and a first terminal coupled to the first supply; the shunting means for shunting electrostatic discharge current during positive and negative electrostatic discharge events away from the receiving means and through the first supply (VSS).

7. With regard to Claim 17, Jenkins et al., in Figure 3, discloses an electrostatic discharge protection circuit (300), comprising: a pair of diodes (D1 & D2) each having a first terminal and a second terminal; a first diode (D1) of the pair having a first terminal coupled to an input/output pad and a second terminal coupled to a first supply; and a

second diode (D2) of the pair having a second terminal coupled to the input/output pad (104) and a first terminal coupled to the first supply; the electrostatic discharge protection circuit operable to shunt electrostatic discharge current during positive and negative electrostatic discharge events.

8. With regard to Claim 24, Jenkins et al., in Figure 3, discloses an electrostatic discharge protection circuit (300) for discharging electrostatic discharge events, comprising: shunting means (108) including, a pair of diode means having a first terminal and a second terminal; a first diode means (D1) of the pair having a first terminal coupled to an input/output pad (104) and a second terminal coupled to a first supply; and a second diode means (D2) of the pair having a second terminal coupled to the input/output pad and a first terminal coupled to the first supply; the shunting means for shunting electrostatic discharge current during positive and negative electrostatic discharge events.

9. With regard to Claim 31, Jenkins et al., in Figure 3, discloses a method for discharging electrostatic discharge, comprising: providing a first discharge path between an input/output pad and a first supply; providing a second discharge path between the input/output pad and the first supply; and shunting electrostatic discharge current during positive and negative electrostatic discharge events through one of the first discharge path and the second discharge path.

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10. With regard to Claims 2, 10, 18, & 25, Jenkins et al. discloses the low noise amplifier of Claims 1, 9, 17, 24 & 31, wherein the first and second diodes are formed by one of polymer devices and metal oxide silicon devices. (column 3, lines 27-33).

11. With regard to Claims 3, 11, 19, 26 & 32, Jenkins et al., in Figure 3, discloses the low noise amplifier of Claims 1, 9, 17, 24 & 31, wherein the first supply is one of a low voltage supply and a high voltage supply, and if the first supply is a low voltage, then the electrostatic discharge protection circuit is not directly coupled to a corresponding high voltage supply, if the first supply is a high voltage supply, then the electrostatic discharge protection circuit is not directly coupled to a corresponding low voltage supply.

12. With regard to Claims 4, 12, 20, 27 & 33, Jenkins et al., in Figure 3, discloses the low noise amplifier of Claims 1, 9, 17, 24 & 31, further comprising an electrostatic discharge clamp (D 5 & D6) to provide a discharge path between a high voltage supply and a low voltage supply during an electrostatic discharge event (column 4 lines 39-41 & 44-45).

13. With regard to Claims 5, 13, 21, 28 & 34, Jenkins et al., in Figure 3, discloses the low noise amplifier of Claims 3, 11, 19, 26 & 32 wherein the positive and negative electrostatic discharge events include a radio frequency input to high voltage supply positive discharge pulse, a radio frequency input to high voltage supply negative

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discharge pulse, a radio frequency input to low voltage supply positive discharge pulse, and a radio frequency input to low voltage supply negative discharge pulse.

14. With regard to Claims 6, 14, 22, 29 & 35, Jenkins et al., in Figure 3, discloses the low noise amplifier of Claims 5, 13, 21, 28 & 34, wherein the low voltage supply floats during the radio frequency input to high voltage supply positive discharge pulse and the radio frequency input to high voltage supply negative discharge pulse.

15. With regard to Claims 7, 15, 23, 30 & 36, Jenkins et al., in Figure 3, discloses the low noise amplifier of Claims 5, 13, 21, 28 & 34, wherein the high voltage supply floats during the radio frequency input to low voltage supply positive discharge pulse and the radio frequency input to low voltage supply negative discharge pulse.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 8 & 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins et al. (US 6,738,248).

18. With regard to Claims 8 & 16, Jenkins et al. teaches the low noise amplifier of Claims 1 & 9. Jenkins et al. further teaches that the system is used in a high-speed communication circuit (column 2 lines 37-40).

Jenkins et al. does not teach that the low noise amplifier is compliant with an IEEE standard selected from the group consisting of 802.11, 802.11a, 802.11b, 802.11e, 802.11g, 802.11h, and 802.11i, and 802.14.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that a device used in a high speed communication circuit would necessarily be compliant with IEEE standards as the interference created by the device would prevent components that the device relies upon from working properly and to enable the high speed communication circuit to operate and comply with standard industry-wide safety requirements.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Botker et al. (US 5,764,464) in Figure 5, teaches an ESD protection circuit for a low input bias current circuit wherein a radio frequency input node (V_{INPUT}) is coupled to voltage supply through shunting diodes 522 & 523, which are coupled anti-parallel to each other. A clamping circuit maintains a voltage level between the positive and negative supply. Botker et al. teaches that positive ESD events are shunted to the positive supply through diodes 522 and 520. Negative ESD

events are shunted to the negative power supply through diodes 521 and 523 (column 4 lines 20-26).

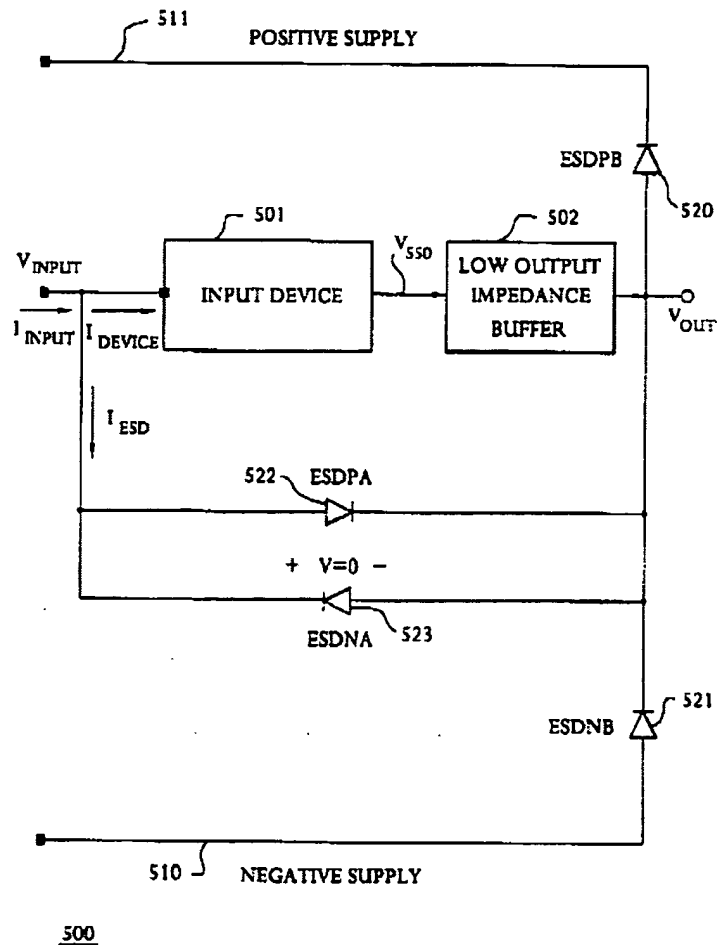


FIG. 5

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bauer whose telephone number is 571-272-5986. The examiner can normally be reached on M-F 8am-5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SAB
02/02/2006



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PRIMARY EXAMINER